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ABSTRACT

This is a report on the second and final phase of an institute which was designed to provide intensive instruction for the chief administrative officials of state archival agencies on the characteristics of and projected future changes in modern information systems, and to introduce them to management tools needed for operating in this new environment. Summaries of the following presentations and discussions are included: (1) a review of past and present goals and objectives (Edwin Bridges, Alabama State Archivist and chairman of the National Association of Government Archives and Records Administrators (NAGARA) Committee on Professional Development); (2) a discussion on the nature of information resources management (Sharon Caudle of the Syracuse University School of Information Studies); (3) a forum on state and federal information policies (chaired by Toni Carbo Bearman, University of Pittsburgh, School of Library and Information Science; (4) a review of state archives planning efforts (John E. Prescott, Joseph M. Katz Graduate School of Business, University of Pittsburgh); (5) a presentation on the methodologies and principles of systems design (Ken Sochats, Department of Information Science, University of Pittsburgh); (6) a forum on archival appraisal and electronic records; and (7) a discussion on future activities of state archivists and continuation of the Institute. Appendices include recommendations of the NAGARA Institute on electronic records; state archives statements about the Institute and future initiatives; a report produced by the state government issues working group; an outline of issues of national concern; and an evaluation of the Institute. (DB)

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ARCHIVAL ADMINISTRATION IN THE ELECTRONIC INFORMATION AGE: AN ADVANCED INSTITUTE FOR GOVERNMENT ARCHIVISTS

Organized and Conducted by the School of Library and Information Science University of Pittsburgh

Co-sponsored by the National Association of Government Archives and Records Administrators

With Support from the Council on Library Resources

June 3-15, 1990

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Background: The Institute's First Phase (1989)

This is a report on the second, and final, phase of an Institute funded by the Council on Library Resources (CLR) and awarded the School of Library and Information Science (SLIS) at the University of Pittsburgh and the National Association of Government Archives and Records Administrators (NAGARA).[1] The purpose of this Institute was to provide intensive instruction for the chief administrative officials of state archival agencies on the characteristics of and projected future changes in modern information systems and to introduce these archivists to management tools needed for operating in this new environment.

The first phase of this Institute was held at SLIS from June 4 through 16 in 1989. The report of the first phase, available from SLIS, provides a more detailed description of the origins and overall purpose of the Institute, profiles of the participants and of the state archives represented, and of the activities carried out during the Institute. During the first phase the following activities occurred:

* Edie Hedlin (then Congressional Affairs Officer for the National Archives), John McDonald (Director of the Automated Information Systems Division, Government Records Branch, National Archives of Canada), Margaret Hedstrom (New York State Archives and Records Administration), David Bearman (Archives and Museum Informatics, a private consulting firm), and Michael Spring (School of Library and Information Science, University of Pittsburgh) presented their perspectives on how archivists are seeking to cope with modern information technology and how that technology is changing.

* The Institute participants followed two tracks, one on the basics of information technology (taught by Michael Spring, James Williams, Edie Rasmussen, and Kenneth Sochats, all on the faculty of SLIS) and the other on strategic planning (taught by John E. Prescott, Associate Professor, Joseph M. Katz Graduate School of Business, University of Pittsburgh).

* Another session of the first Institute was provided by Edwin Levine (Staff Director, Joint Committee on Information Technology Resources,

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[1]There is discussion, as will be seen in the text of this report, about the continuation of this Institute into a third phase. However, this report is restricted to the Institute initially funded by CLR.

Florida Legislature) who discussed state policy issues for archives in the changing information environment.

* All during the Institute, the participants also met in three small groups to complete strategic planning exercises and to work on state archives planning documents.

Five basic conclusions emerged from the 1989 Institute. These were as follows:

1. The archival management of electronic records is probably the most important, and certainly the most complicated, issue currently before the archival profession.

2. Dealing with electronic records leads to a fundamental re-thinking of other aspects of archival administration and the management of archival institutions.

3. Strategic management and planning techniques can be a useful and powerful tool in determining how to administer electronic records.

4. Electronic records are as much a political issue as a technical or administrative matter.

5. The present situation is still fluid enough for archivists and their institutions to influence the creation and administration of electronic records.

These conclusions served as the background for the planning of the second phase Institute, as well as the ongoing commitment to review and discuss the individual state planning efforts of each of the states represented in the Institute. What follows in this report is a description of the activities undertaken during the second phase of the Institute.[2]

Starting the Institute: Setting the Scene and a Review of State Archives Activities in 1989/90 (June 4, 1990)

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[2]Attending the second phase of the Institute this year were Richard Belding, Kentucky; Edwin C. Bridges, Alabama; Charles Dollar, National Archives and Records Administration; Robert M. Dructor, Pennsylvania; Lila J. Goff, Minnesota; Larry J. Hackman, New York; Dwight Harris, Mississippi; James S. Henderson, Maine; Gordon O. Hendrickson, Iowa; H.T. Holmes, Mississippi; David H. Hoober, Arizona; Sidney F. McAlpin, Washington; Gerald G. Newborg, North Dakota; Virginia Newton, Alaska; David J. Olson, North Carolina; Harry F. Parker, Pennsylvania; Peter E. Schinkel, Georgia; Ken Thibodeau, National Archives and Records Administration; and Roy H. Tryon, South Carolina. Richard J. Cox, School of Library and Information Science, University of Pittsburgh, served as reporter and wrote this report. Liisa Fagerlund, Senior Information Officer, ACCIS Secretariat, Geneva, Switzerland, facilitated the sessions.

The Institute started, after greetings and various announcements, with Edwin Bridges, Alabama State Archivist and chairman of the NAGARA Committee on Professional Development,[3] reviewing last year's first phase, goals and objectives for this second year, and how and what the small groups would be doing. Bridges first reviewed some of the other national initiatives that were currently under way relating to archives and modern information technology. He mentioned the following:

* the establishment of a NAGARA committee on information technology;

* NAGARA's increasing work with the Council on State Governments on state and national information policies (that was aided by the first phase of the Institute);

* NAGARA's work with the National Association of State Information Resource Executives (NASIRE)[4] on a joint grant proposal for a conference that was held earlier in 1990 on information technology and policy and the changing role of NASIRE in taking a broader view of state government information management;

* the National Commission on Libraries and Information Science (NCLIS) drafting a statement on principles of national information policy;

* the expanded interest of the Council of Library Resources and the American Council on Learned Societies in public information policies and their sponsoring of conferences on the impact of electronic information systems on humanities research;

* and the National Governors' Association's State Information Management Working Group's paper on the interest of the states in a federal information policy (primarily responding to the OMB Circular A-130).

All of this activity reflected a growing recognition, noted Bridges, that the management of electronic records of archival value should be considered an important aspect of information policy.

David Hoober, Arizona State Archivist and member of the National

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[3]Other members of this committee are Larry Hackman, New York, and David Hoober, Arizona.

[4]NASIRE was formerly called the National Association for State Information Systems, Inc. (NASIS).

Historical Publications and Records Commission (NHPRC), reported on the NHPRC's "Electronic Records Issues" statement that was commented on by many of the Institute participants; Hoober drew special attention to the Commission's self-described role as a catalytic agent.[5] He also noted that the Minnesota Historical Society submitted a proposal for a conference on electronic records issues and archives to be held in Washington, D.C. in January 1991; the conference proposal (which was funded) would be open (by invitation only) to a wide spectrum of archivists, not just state archivists. Bridges pointed out that this initiative by the NHPRC reflected David Hoober's efforts in urging the Commission to consider the need for increased attention to this issue (and followed Hoober's participation in last year's Institute).

Bridges then reviewed the Institute's planning committee's ideas about what the second phase of the Institute should seek to accomplish. One focus of the 1990 Institute would be on two working groups, one on considerations of national issues and initiatives supporting state archival efforts, the other on the considerations and guidelines for state archival programs to manage electronic programs. These two groups drafted statements of principles on these issues on the state and national levels (see Appendix Three and Four). Roy Tryon, South Carolina Department of Archives and History, chaired the group on national issues and Bridges chaired the group on state issues.

Larry Hackman, New York State Archivist, noted the need to have some informal discussion about what happens after the completion of the Institute and the needs of the state archives and the archival community in general. Bridges noted that a lot of interest had been expressed about the first Institute and that there was some interest by funding agencies in continuing support for some extension of the Institute or for some other activity that would continue its work. Throughout the Institute discussion returned to this topic, and a small ad hoc group met to draft some ideas for sustaining the momentum started by the Institute. Recommendations for action are mentioned below in this report.

Each state then reported on its activities over the past year. The states had been sending to each other through the year progress reports and related documents relative to the states' work with electronic records. All of the Institute participants believed they were better prepared to deal with electronic records issues, although there was a broad spectrum of results from state archives efforts over the past year. A variety of major issues and concerns emerged during these reports, including the following:

* Recognizing the difficulty of influencing state information policy (or even determining the nature of the policy). One state, which had done significant work in planning for managing electronic records having archival value, noted the lack of centralization of information policy in the state government. Other participants commented on similar problems. A number of the participants described their

[5] *Electronic Records Issues: A Report to the Commission*, Commission Reports and Papers, no. 4 (Washington, D.C.: National Historical Publications and Records Commission, March 1990).

meetings with state government information policy agencies and organizations to express concern about electronic records possessing archival value and the problem of proliferation of electronic records through main frame systems and personal computers.

* Setting firmer relationships between state archives and state government data processing operations to determine how to schedule electronic records and how to preserve and administer electronic records that possess archival value. A number of the states are entering into joint planning with these types of agencies in order to cope with archival records in electronic form. Some of these states have been encouraged by positive responses to the state archives' expression of interest in working more broadly with electronic records.

* Transforming existing positions or creating new positions in the state archives that bring into these institutions professional staff to specialize in electronic records who have stronger education and experience backgrounds in information technology. A number of participants expressed the need for sharing information about how to revise these kinds of position descriptions or how to create new positions. One state archivist noted that he was putting one percent of his budget into staff development, sending staff to conferences, workshops, and other educational programs with a focus on new technologies.

* Completing internal state archives planning regarding electronic archival records. One state archives completed this process, reported needs back to the state government and legislature, and became involved in the information technology systems design process. Another state archives will be largely replicating the first phase of the Institute (with its technical presentations and discussion of the implications of information technology for archivists and archival programs) with its own staff in an effort to stimulate interest among the staff. Another state archives contracted with an external strategic planning expert and has undertaken a planning effort for the entire institution, including electronic records as a major strategic issue to be addressed.

* Drawing on other state government information policy documents (such as Florida's) to move forward in planning and implementing state archival records in electronic form. One state archives discovered that this helped their credibility in working with state government data processing and information policy people.

* Issuing policies governing the acceptability of electronic media for archival storage and preservation. One state archives issued a policy

that optical disks were not acceptable and created a furor. This led to an effort to develop optical disks standards by early 1991. Charles Dollar, National Archives, disagreed with the concept that archival programs should dictate acceptable media for storage of electronic records with archival value, suggesting that it would be better to influence the nature of the media so that it allows migrating the data as needed. This matter was not resolved, but it reflected one of many issues that continually re-emerged during this Institute.

The two representatives of the National Archives and Records Administration (Charles Dollar and Ken Thibodeau) reviewed activities in that institution, including the preparation of a strategic plan for policies regarding electronic records and two studies that were completed by the National Institute on Standards and Technology (NIST) for the National Archives regarding electronic records standards and storage. The difficulties of identifying priorities and targeting resources in the National Archives were also discussed.

There was also some discussion about communicating state archives issues to national bodies and conferences such as the forthcoming White House Conference on Library and Information Services (WHCLIS II). Several different position papers (in draft and final form) from other groups on public information policy were distributed: these included those of the State Information Management Working Group of the National Governors' Association, an article by Richard M. Dougherty on federal information policies, and the Canadian Treasury Board's Management of Government Information Holdings.[6]

Roy Tryon completed the full group's first day's activity by discussing the NAGARA Conference on Electronic Records that was held in April 29-May 1, 1990 with NHPRC funding support. The conference focused on six basic issues: public policy considerations in managing electronic records; legal and definitional concerns of electronic records; the role of archivists and records managers in information systems design; the role of information resources management (IRM) and data processing managers in the preservation of electronic records; obstacles to implementing the best available advice in managing electronic records; and the strategic considerations in dealing with the identification and preservation of information in electronic formats. Tryon reviewed the written summary of the conference which had been distributed to Institute participants, highlighting the discussions, problems, and other issues that emerged at the meeting. NAGARA will publish a paper on electronic records as part of their "Government Records Issues." Tryon emphasized the problems of communication among IRM and records management adherents and archivists that occurred at the conference and that seem to characterize work in the states. Tryon posed four questions for the Institute participants:

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[6]*Management of Government Information Holdings* (Canada: Administrative Policy Branch, Treasury Board of Canada, January 10, 1989); Richard M. Dougherty, "Federal Information Policies: Why Should the Academic Community Be So Concerned?" *Library Issues* 10 (November 1989); and Lorraine Amico, Jo Martinez, and Norm Sims to State Information Management Working Group Members, April 16, 1990.

1. Are there any other areas of interest or action that should be acknowledged?

2. What priorities do the Institute members have regarding action needed within their own states and on the national level by NAGARA?

3. The original project proposal calls for development of two publications: an issues paper and a brochure-type checklist for use in state information system development.

   a. Are there any suggestions on the nature and scope of the issues paper?

   b. Conference participants agreed that the checklist brochure would be difficult to produce without a better- developed or articulated relationship between archivists and IRM and data processing (DP) managers. Do you agree? Is there any brochure-type spin-off from the issues paper that would be useful to state archivists in developing an electronic records program in state government?

4. Should NAGARA seek additional electronic records project support from the NHPRC? If so, what?

After Tryon's presentation there was general discussion about various aspects of the conference and its implications. Most of the discussion focused on how to interest IRM and DP personnel in archival issues. This presentation served as an introduction to what the two working groups (one on national issues, the other on state issues) would be doing during the Institute. Tryon is also responsible for writing an issues paper for NAGARA, and he sought comments and input about what should be included in this paper.

A Glimpse at the NASIS Report: *Managing Information Resources: New Directions in State Government*[7] (June 5, 1990)

Sharon Caudle, Assistant Professor in the Syracuse University School of Information Studies and one of the co-authors of the 1989 NASIS (now NASIRE) report, made a morning presentation on the nature of information resources management (IRM) and the specific findings and recommendations of the report on IRM in state governments. Throughout her presentation she illustrated IRM

[7](Syracuse: Syracuse University School of Information Studies in cooperation with the National Association for State Information Systems, Inc., August 1989).

principles by reference to the NASIS report and to the specific state government case studies.

Caudle reviewed the functional areas of IRM ranging from data processing, records management, and archives to printing and reprographics, office systems, research and statistical information management, mail and message services, and others. She briefly mentioned some of the major phases of the historical development of information management, noting that the concept of IRM is still in a developmental stage. The present IRM concepts and assumptions are that: information resource needs must be linked with basic management; information technologies must be integrated and managed together as a whole; attention in the organization should be shifted from technology to the content of information; information is a critical organizational resource; information is a resource that has a life cycle; and managers and users are accountable for the effective and efficient management of the information for which they serve as caretakers. She sees a shift from technological and technical issues to managing the content of information through information needs analysis, records management, and other such activities. New competencies and skills will become important in managing information technology, information flows and services, and human resources and in policy formulation and ethical issues.

Major areas of dynamic change in information resources were the next topic. These included presenting the vision of what information resources means to the organization, designing planning processes to define information needs, and determining organizational changes and concepts. The foundation of an IRM vision is that information will be provided in a timely and reliable manner that supports the organization's mission. There was some question raised (with ensuing discussion) about whether the IRM vision has anything to do with the archival institution which is often dealing with information after it has lost immediate value to the creator but that might have considerable other values to other information users. This was typical of the discussion raised by Institute participants concerned with how archival functions have been seen in IRM principles and practices.

Caudle also made the point that business strategy language is being increasingly used in government and other such organizations and that this language serves as a communication link between information technology experts and top-level managers; much of this language causes problems, of course, for archivists trying to communicate their concerns with state officials.

Caudle continued the consideration of an IRM vision by reviewing decision principles for IRM, leading to some discussion about whether government is really interested in providing access to information and meeting information users' needs; it appears that civil liberties groups and other such bodies have been forced to be the main proponents for such access. Another issue was raised by the multiplicity of constituencies that need to be served by government, and what is more important -- principles or processes.

A variety of other aspects of IRM and its applications in state government (including the primary functions in information technology organization) were reviewed by Caudle. She described how these functions are now changing, the organizational design of information technology, and an organizational model for

IRM, breaking it down into corporate services, customer relations, information services, management services, and planning and policy. She discussed the Kentucky information architecture as an example of a state that has a fully-developed IRM vision and is working towards implementing that vision.[8] Caudle discussed some of the other case study states used in the NASIS report, revealing the lack of coordination between central IRM agencies and other information agencies, including records management and archival operations, and the various reasons for this lack of coordination.

After lunch the participants reconvened briefly into their two working groups, divided up assignments, and did individual reading and work. They again met in the two working groups the next morning.

State and National Information Policy Forum (June 6-7, 1990)

Toni Carbo Bearman, Dean of the University of Pittsburgh's School of Library and Information Science, introduced the forum by considering some of the definitions of information policy and posing some questions regarding information, policy, state and national boundaries, and ramifications of various national and international information policies. She mentioned some of the existing federal policies and legislation and federal agencies that set or influence information policies. Dean Bearman then introduced the first of three speakers: Jerry Berman, Director of the ACLU Project on Information Technology and Civil Liberties and a Policy Fellow at the Benton Foundation, who has had a tremendous amount of experience in setting or influencing federal legislation on information policies and is a frequent speaker and writer on these issues. Berman has worked specifically on the Foreign Intelligence Surveillance Act of 1978, the Privacy Protection Act of 1980, the Cable Communications Act of 1984, and the Electronic Communications Privacy Act of 1986.

Berman concentrated on the current debates on federal information policies. Many of the present policies and legislation were established, he noted, before the advent of the pervasive use of the computer, especially the personal computer. The Freedom of Information Act (FOIA) does not make reference, for example, to access to information in electronic form. Such omissions led to an agency by agency decision making process in the way that they utilize information, resulting in much confusion. The debate about the need to revise policy for electronic information has emerged as a major issue of the new Presidential Administration over the past year. This has led to proposed amendments (HR 3695 and S 1742) to the Federal Paperwork Act (PL 96-511[1980]) to incorporate electronic information and ensure that information is made available to the public in a reasonable and cost-realistic manner. However, language in the amendments at the time of the Institute still opened up the possibilities of inequities in private use of public information and other issues. The new legislation was expected to

[8]Participants received a copy of the Kentucky plan from Richard Belding, Kentucky State Archivist, on the first day of the institute.

pass, however, and Berman suggested that that will open up a whole new means of government dissemination of information through electronic means, while stimulating many new questions and concerns to access that have not been clarified. At present the federal government has the right through the FOIA to provide information in any means that it sees fit, paper or in electronic form.

Berman then mentioned the meeting held last fall, sponsored by the Benton Foundation, that dealt with the impact of the electronic media on the government record. One of the questions raised at this meeting was the matter of what is a federal record. Is the electronic mail system used by the White House (which has become a controversy because of documents stored in this system related to the Iran-Contra case) an official federal record?

Dean Bearman than introduced J. Timothy Sprehe, Senior Policy Analyst in the Office of the Management of the Budget's Office of Information and Regulatory Affairs (OIRA), who has written widely on the issue of federal information policy and was the principal author of OMB Circular A-130, the *Management of Federal Information Resources.*

Dr. Sprehe initially discussed the way that OMB works and the political issues presently at work on the amendments to the Paperwork Reduction Act. OMB now reviews all potential agency regulations and policies before dissemination to the public in a way that is not open to public scrutiny. The proposed amendments would make disclosure more open, although the Presidential Administration has noted that it will veto any effort to make disclosure a more open process.

Sprehe then considered the current OMB Circular A-130, originally issued in late 1985, and its present status. He noted that the original Paperwork Reduction Act focused mainly on the collection of information, but did not really address the dissemination of that information. The present proposed amendments would provide better guidance on access. Many of the federal electronic information systems were designed <u>without</u> any regard for the possibility of dissemination. Sprehe also noted that OMB Circular A-130 was not intended to provide privatization of public information, although it has been considered mainly that way and that the present efforts to revise the circular grew out of the diverse reactions by many user groups. Two gaps in A-130 are being dealt with, one of these gaps is on records management and the other is on the role of the states.

Dean Bearman then introduced Edwin A. Levine, Staff Director, Florida State Legislature Joint Committee on Information Technology Resources, who provided the state government perspective on information policy. He discussed some of the tremendous growth in information technology, the relatively low costs of using this technology, the ease of using and creating the information, and the growing sophisticated use of information systems. He noted that some of the more innovative thinkers about information technology are concerned that the main issue is really the <u>selection</u> out of all information that is being created. Selection is mainly related to the matters of access and dissemination.

Levine then considered lessons learned over the past year in Florida as that state has made an effort to place itself in the modern information age. He noted that increasing state government budget difficulties were also making the states more competitive in information management; the Florida legislature, for example,

passed legislation making it possible for local governments to copyright and sell software to bring more revenue into the government coffers. This is, Levine suggested, playing havoc with FOIA legislation, making public access a much more difficult question and raising as an issue what is a public record and what is public information. He also talked about the need for an integrated information infrastructure (networks) that could allow the states (and others) to exchange information through access to a variety of databases.

There was then a period of discussion with the speakers about a number of issues. Berman noted, in response to a question about the viability of general information policy statements, that the archival element of information policies has been omitted, not deliberately, but because there has not been a substantial archival presence in deliberations relative to the policies. A question was asked concerning how information about information systems is made available. This question was raised in reaction to the removal of a locator system in the amendments to A-130, largely requested to be removed by the American Library Association because of its concern for the impact on the Government Printing Office and other publishers. This led to a discussion about the viability of the records retention system in the federal government; this is especially frustrating for the state government archives because they are not able to find a clearinghouse for information about federal records, information systems, and information policies many of which are interconnected to state government records issues. Sprehe noted that OMB could undertake some specific case work about these matters. Sprehe again mentioned that a contract had been given to Charles McClure of Syracuse University to do a study on potential information systems locator processes. Levine noted that he thought this was impossible to do, because it was impossible to do this even in Florida because of the degree of change and innovation that is occurring.

There was also a lively discussion about a number of other issues, including privacy, stakeholders that state archives should work with on information technology and policy concerns (more of a presence at the federal level by the archival community was identified as a helpful action), how legislation and federal policy can be influenced or set, and the role of the private information industry as not being much more influential than many other professional associations and disciplines. Sprehe was asked how state archivists could work with OMB (OIRA). It was noted that this was the first time that state archivists had had an opportunity to discuss matters with this agency. Sprehe replied with some suggestions about archivists suggesting language which recognizes the impact of federal regulatory agencies on state government records retention practices and requirements. Berman advised that archivists form a national body or group that has as an objective influencing federal information policy, seeking a lobbyist or Congressional sponsor, and taking action to influence the current proposed amendments to the Federal Paperwork Reduction Act. There was considerable discussion about these matters and the appropriate roles of archivists and archival associations.

The discussion with Sprehe, Berman, and Levine continued the next morning with a focus on the proposed "Paperwork Reduction and Federal Information Resources Management Act of 1989" (H.R. 3695). The discussion

concerned suggestions for wording to reflect archival issues and state archival and records management concerns with this legislation. Specific comments and concerns raised were as follows (relative to sections of the November 17, 1989 version of the bill):[9]

* Add appraisal and retention statement and the need for improved coordination with states;

* Add statement on the potential impact of federal information technology standards and practices on state governments;

* Prepare legislative history on the concept of the Federal Information Locator System to make expectations clear;

* Add wording that stipulates consultation with the state governments about some of the actions taken by the federal government in information technology and its use;

* Include costs of maintenance of federally-induced records programs along with wording to legislative history;

* Add section about the inconsistencies between federal and state government information policies and practices;

* In legislative history sections and references include intergovernmental (federal-state) working groups and other concerns about information resources management policies;

* Add advisory committee to include state representatives, archivists, and others and refer to the destruction of records.

The discussion was an interesting and useful exercise in the need for state government archivists to be more active and vocal in expressing their interests, concerns, and ideas about federal information policy and its impact on state information management concerns and on the preservation and use of the archival record. Several archivists continued work on specific recommendations for revisions to the Paperwork Reduction Act. These revisions were adopted by the Institute participants on the last day (see Appendix One).

Reviewing State Archives Planning Efforts (June 7-8, 1990)

The afternoon of June 7 consisted of a presentation by John E. Prescott,

[9]Since this bill was undergoing constant revision, no efforts have been made in this report to relate the discussion to the specific sections of the bill. This report is only an effort to capture the flavor of the discussion.

Associate Professor, Joseph M. Katz Graduate School of Business, University of Pittsburgh, on his review of the state archives planning documents prepared since last year's Institute.

Prescott started out by presenting his general impressions on the problems and difficulties in strategic planning. He made five points. First, strategic planning is often based on historic notions, that is data from the past is used to project into the future, and this can cause problems in accurate forecasting for the organization and its environment. Second, the information that often comes out in plans is distorted because information is incomplete, or the planning process is distorted because of the way that planning has to occur in the parent agencies. Third, strategic planning is often incomplete because of the perspective or frameworks that are used to guide the planning. Organizations often know where they want to go but they don't really know how to get there. Fourth, simplicity of the planning process is often lost in complicated reports or, and much worse, the analysis is much too simple. Fifth, the strategic planning process is often viewed by an organization's managers as something that they can't argue against ("motherhood and apple pie"), but they really don't understand the process, implications, or other important issues. Most important, the managers don't often "buy into" the planning process or final results of the planning process.

Prescott then considered the state archives planning documents. In this area he described seven themes present in the reports. First, there seemed to be a struggle with the concept of what "strategy" is meant to be or what it is. There needs to be an overall plan with objectives by management that drives the entire planning process.

Second, there were problems with the notion of what data should be used and how it is used in the strategic planning process. There was also a problem with acquiring the right amount of data needed to carry-out (in a successful manner) the planning process. Prescott noted that the quality of a planning process is often dependent on the quality of the data gathered and the assumptions that underlie the data.

Third, there was a theme of trying to identify the stakeholders in the reports, but some difficulty in trying to determine how to get the stakeholders involved in the planning process. Prescott had a sense from reading the reports that there were stakeholders who were interested in doing state archival functions, as well as others who were not interested in the archival perspective or functions at all; this indicated the importance of involving stakeholders in the state archives planning efforts and educating them about the state archives' mission and responsibilities. One problem raised was the large number of stakeholders identified, and the need to identify priorities among these.

Fourth, another theme that emerged from the reports regarded how to carry-out the process itself, and the participants talked about some of the high- and low-lights of the planning process. How can, for instance, the process be kept from being stale?

Fifth, another common concern that emerged was the lack of any consideration in the state reports for the implementation of the plan. There is a need to integrate the strategic plan into every aspect of the organization's life. Prescott talked about the fact that a plan should not take into account every

possibility or contingency, otherwise the plan will be unworkable or too difficult to make it flexible for new concerns and issues that arise. Strategic planning, Prescott noted, should not be done more than once every five years, if done well. Prescott noted the need to set aside a certain amount of time to think strategically, not letting the day-to-day operations take over completely so that they run the institution. He also advised that providing too much detail is equivalent to wearing a tailor-made, tight suit, that can restrict movement.

Sixth, another theme that emerged from the reports was the need to be proactive in setting forth the plan. One participant noted that state archives have been good in planning but not in implementing the plans.

Seventh, simple ideas need to be conveyed in the strategic plans that can be widely and readily understood, although there is not much evidence that such ideas are appearing in the state archives' efforts.

Prescott also responded to a number of questions and comments made by the participants. He discussed the matter of resolving communication problems that occur in the planning process between various levels of managers. Upper-level managers need to be willing to listen to a lot of complaints from the lower-level staff. On the other hand, the lower-level staff need to articulate their views on resources, activities, and other concerns. Another concern raised was the issue of the cost of facilitators for the strategic planning process; Prescott suggested making use of local universities, both faculty and graduate students, who are willing and interested in doing such work. There was some disagreement about this because of the issue of credibility and the fear of investing significant time in an effort that might not work. Other conversation continued about the issue of the use of an outside facilitator versus conducting strategic planning as a completely internal process. There was discussion about a variety of other issues related to the difficulties and challenges of the strategic planning process, what the final plan should look like (its level of detail), and other similar concerns.

The next morning Prescott spent with the Institute participants in a question and answer session in which a range of concerns regarding strategic planning in the states was discussed. Matters such as the motivation of staff, strategies for starting the planning process, and the degree of detail in a finished plan were considered during this time.

After this session, Institute participants gathered in their two small groups to work on national and state archival issues and policies.

Systems Design: Methodologies and Principles (June 11, 1990)

Ken Sochats, Department of Information Science, School of Library and Information Science, University of Pittsburgh made a presentation on systems design. Sochats started by noting that he didn't see that archives had science, engineering, management or other clear set guidelines guiding this field's work. Did the field have a specified theory, clear mission, adequate models, and satisfactory tools for its work in doing systems design, especially in information retrieval and storage? He mentioned some of the similar problems that have plagued librarians and library science, especially in the area of classification.

Sochats then moved to the elements of systems, describing input, processing,

storage, control, and output and the manner in which they operate in closed and open systems. Systems tend to be viewed as design problems and issues when in fact they need to be viewed as part of the larger organizational environment; for example, simple systems don't tend to work well in complex environments and systems get added on to as needs arise but often don't get fully integrated into the overall organization. He continued to describe other basic systems design principles (isolation, specialization, approval, checks and balances, and linkages) that are used to design workable systems. Responding to a question, Sochats described the difference between formal (built on existing forms and how these forms are used in the work of the organization) and informal (based on irregular and personal methods of work such as the use of oral communication rather than regulated written forms) systems.

Sochats then led the group in an exercise on systems design by asking what an archives is in the systems sense. There was discussion of the main functions of an archives. Using this discussion as a basis, Sochats talked about the fundamentals of systems design (ranging from outlining the situation through defining the requirements to installing and evaluating the system). There was discussion about how archivists need to work with analysts as they design systems as well as the steps of designing systems for archives. One participant raised the issue of whether the state archives and other government archives can really hope to intervene in the design and implementation of information systems, and if so, what is the implication of this for how archivists work with systems designers. Another participant was more hopeful because of the "open systems environment" in the information technology standards world. There followed a spirited discussion about what needs to be kept and the archival appraisal process for making such decisions. Sochats mentioned in the discussion that there are probably now more problems in the documentation, rather than creation, of the system, a fact that certainly relates to the archivists' need to select and preserve information with archival value potentially captured by these systems. Sochats also stated that, in his opinion, systems analysis practices adhere more closely to professional standards than to legislative or other legal mandates. This suggests that archivists need to continue work on basic codification of archival theory and standards as well as with computer assisted software engineering (CASE) system developers. Corporations also have a great and increasing concern for archiving software, presenting another opportunity for archivists to have an influence.

After a lunch break, Sochats returned to his presentation on systems design by describing the hierarchy of learning (from data to information [understood data] to knowledge [related information] to wisdom [ability to use knowledge to build models]). He related systems design to this hierarchy. He then discussed the systems analyst's notion of the "value of information" and looked at three (of many) different models of value. There was, again, a lengthy discussion about the roles of state archives in working with systems analysts and problems with existing models and techniques of archival selection criteria. Sochats turned his attention to systems design types (original design, redesign, and modification) and systems analysis/design approaches. He also made a fuller presentation of one way of following through on a systems design. He cautioned that many systems analysis and design techniques (especially flowcharting) misjudge timing issues,

overlook the importance of people, and don't fully take into account the role of institutional departments. These kinds of problems need to be kept in mind, Sochats counseled. This led to another discussion about archivists' involvement in the systems process; Sochats stated that you can't be in this business without being in this business, so that there needs to be some investment into the continual maintenance of information technology. Sochats also emphasized, because of this, the need to make careful and wise choices at the beginning of the process. There was some discussion about having analysts actually do the archival work, if possible, to understand fully the archival process in order to design effectively archival systems.

Archival Appraisal and Electronic Records (June 12-13, 1990)

This session was based on the report published by the United Nations, *Management of Electronic Records: Issues and Guidelines* (1990), principally written by David Bearman and Charles Dollar. Liisa Fagerlund started the session by providing background on ACCIS (the Advisory Committee for the Coordination of Information Systems), the UN agency that published the report. She also mentioned the work of the International Council on Archives' Section of Archivists and Records Managers of International Organizations and this group's work on electronic records concerns and in spurring on ACCIS' efforts in this regard. She then introduced David Bearman, consultant, and described his role in the ACCIS work and the report on electronic records.

David Bearman started off by noting that the UN report was not specifically about appraisal, but that it had a lot of suggestions about this archives/records management function. He suggested six points (see Table One), based on the following assumption: Appraisal is the central function of the archival profession, providing documentary accountability for society. He questioned how well archivists are doing this. He also noted that some present archival practices make it difficult for archivists to be taken seriously from a management point of view. Bearman also suggested that in some cases it appears that a totally random approach might work better than the archivists' supposed planned appraisal approach which has not enabled archivists to look at more than a minor portion of records.

His first point was that the object of archival appraisal as presently practiced is the record, but archivists ought to be appraising functions. To illustrate this point, he returned to the UN report, which began with a definition of an electronic record. A record is a document that "participates" in a transactional process and is communicated during the process. Appraisal depends on knowledge of the application or process that generated the record. The application needs to segregate material by what archivists want to do with it. This led him to go back and focus on the fact that what archivists really wanted to do all along was to document the basic organizational functions, that this was the original intent of many of the basic archival and records management principles and practices. Functions have documentary requirements, records don't have documentary requirements. Some Institute participants disagreed that this

consideration has been totally absent in state archives, citing use of legal requirements, legally mandated functions, and the use of budget documents that define agency functions and responsibilities. Bearman suggested that if state archives documented all of the functions of government, these institutions would be one of the few (maybe the only one) that had such information and this could be valuable to government and provide the state archives some increased visibility.

Bearman's second concern was that strategically archivists and records managers have followed an "onion" approach, peeling away one layer after another to retain what they want (getting to the core of the primary documentation), rather than directly focusing on the small percentage of records that are desired and enhancing access to these. Archivists' strategies ought to be focused on what they want. Some participants noted that the reason that they have to deal with the "onion" approach is because they have statutory requirements to provide records management services and cost-benefits or cost-avoidance as well. Another participant suggested that this requires a total reworking of the state archives environment, suggesting that archives have responsibility for managing aspects of agencies that they don't have any authority for, except as it relates to their records. Bearman explained that it was as much a matter of conveying more properly what archivists and records managers were seeking to do. There followed considerable discussion about the notion of archival "value."

Bearman also discussed briefly his other concepts of archival appraisal. These included the following:

* The archivist's main focus has been on conducting appraisals rather than in regulating roles and responsibilities.

* The archivist's present appraisal practice fits into the cost-benefits model which doesn't work well in this environment, and the focus should be on risk management.

* The main archival appraisal tactic has been to stress permanent value and to inventory records rather than to emphasize that records have continuing value (subject to change and re-evaluation) or to make use of Information Resource Directory Systems (IRDS) and the data dictionaries and other tools created for directing people to records held by the creating agencies and other repositories. The IRDS directories can be adapted to archival purposes, primarily for descriptive and appraisal purposes. Bearman noted that although this effort was costly, so are traditional archival practices in appraisal, description, and other functions.

* The archivist's present emphasis has been to bring records considered to have archival value into the custody of archival repositories and then to describe the records for use. He urged that archivists stress access to records, wherever they might need to be maintained, by focusing on the documentation of activity, rather than records.

TABLE ONE

Bearman's Six Points on Archival Appraisal

Approach	Present	Proposed
Strategy	Records-Based	Applications-Based (Function)
Tactics	Focus on Disposable/Access Enhanced by Reduction in Volume	Focus on Retainable/Access Enhanced by Value Added Links
Method	Conduct/Assist	Regulate Roles and Responsibilities
Criteria	Cost-Benefits and Archival Values	Risk Management
Determinations	Permanent/Inventory	Continuing Value/IRDS
Consequences	Custody/Description of Things	Access/Documentation of Activity

After a lunch break, Bearman focused on two areas. One was to review some of the specific elements and recommendations of the UN report. The other was to consider specific implications for electronic records of the increasing use of electronic records. One of the main points that he made was that information in electronic form does not compare exactly to the standard notion of record; by this, he meant that the system has to be forced to create a "record." Still, he does not think electronic records represent a different world, but in fact that these records pose helpful and healthy issues that should have been asked by archivists and records managers working with paper records. In response to a question about what archivists should do to work with electronic records, Bearman described the National Archives of Canada's recent efforts as one possible way to go, adopting a regulatory role, following risk management, developing a specification of electronic records forms for archival records (FOREMOST), and using the IRDS approach to data dictionaries and directories. Bearman was also asked about what is a reasonable approach to managing electronic records. He noted that archivists require some source of agreed upon definition of functions within an agency or state government as a whole and that they should try to issue a documentary standard by taking advantage of opportunities within the state

government environment. One participant noted that these kinds of issued policies are often ignored, to which Bearman responded that such policies needed to be looked at as an opportunity (try to attach to things that have meaning to the organization). Bearman also briefly discussed the possibility of deriving meaning in the structure of documents and the ability of some information technology to scan and evaluate such structures; this might lead to effective automatic analysis of documents at the item or transaction level.

After David Bearman's presentation, Charles Dollar of the National Archives discussed work on the functional requirements of electronic records management that is going on at the National Archives. This work has been based on the OSI environment as a way of determining how electronic data exchange standards need to be affected. Dollar described some of the records attributes and the processes that affect records and the archival functions such as creation, appraisal, use, and disposition, leading the participants in a discussion about these elements. The attributes he reviewed were identification, type, function, subject, authentication, logical or physical structure, and portability; he also reviewed records processes such as version control, tracking, search and retrieval, migration, file, disposal, and transfer. Dollar presented his view that archivists should not interfere in the systems design process; Bearman disagreed with this view. Discussion ensued without resolution.

Dollar then briefly discussed the recently issued *A National Archives Strategy for the Development and Implementation of Standards for the Creation, Transfer, Access, and Long-Term Storage of Electronic Records of the Federal Government*, National Archives Technical Information Paper No. 8 (Washington, D.C.: National Archives, June 1990). This paper is an effort to avoid either cutting edge information technology or trailing edge information technology standards, avoiding either premature commitment or a commitment that is too late in standards development. The National Archives will support only those standards that have a major user base in vendors and other end-users. In terms of what the National Archives will be working on in the future, Dollar mentioned that they will be doing technology forecasts and meetings with other archivists, but noted that there is no specific agenda of such actions at the present. He did state that the National Archives will become a full voting member of the various ANSI committees concerned with information technology standards. There was considerable discussion about how communication between the National Archives and the state government archives and the archival community needs to occur. As part of the effort to provide some communication, Dollar reviewed the current projects of the National Archives' Archival Research and Evaluation Staff (including expert systems application for disposition, working with NIST on standards and on Federal Information Processing Standards (FIPS) and other areas); he lamented that there is little funding for research other than staff (there is a staff of ten).

The next morning, June 13, Ken Thibodeau of the National Archives gave a presentation on activities at that institution's Center for Electronic Records, established in October 1988. He discussed the plan for the Center, which is simply stated "to create a model program for archival electronic records." The operations focus is to have, according to Thibodeau, a "competent" program.

Specific objectives (divided according to broad strategies and operations) are to use the technology advantageously, complete accessions promptly, accomplish basic archival functions, preserve electronic records, provide conscientious reference, keep up with electronic records technology, and make intelligent applications of archival principles and practices. He reported that in both preservation and accessioning the Center's program is in a crisis stage, with backlogs and insufficient resources. Reference is at a threshold stage, that is it has a limited capability but it is able to satisfy most demands. Thibodeau also mentioned some of the specific approaches that are being used to store electronic archival records and plans for the Center in the new National Archives building now under construction. Thibodeau also noted that the Center has a structured program for outsiders who want to come in and learn about electronic records. There was also discussion about ways for the various state archives and the National Archives to work together in sharing information about electronic records and other functional areas and to cooperate in specific projects and initiatives. In response to a question, Thibodeau discussed some ideas about what state government archives should be doing on behalf of electronic records; he cautioned about knowing what you are getting into, looking at available resources and realizing what you can do with those resources.

Larry Hackman, in response to the Thibodeau presentation, noted how valuable it has been to have the National Archives representatives participating in the Institute. Hackman expressed concern with how such communication and cooperation can be sustained after the Institute ended. Hackman proposed the following for consideration by the group:

> The Archivist of the United States create a small joint Federal-State committee on electronic records which will meet at least two times per year to exchange information, seek shared strategies, and plan for effective advocacy for policies and resources relating to the following:
>
> * Standards affecting electronic records of archival value;
>
> * A research and development agenda for electronic records;
>
> * Disposition analysis, especially for intergovernmental electronic records;
>
> * Training and technical assistance and exchange of staff.
>
> This joint committee should issue a brief annual newsnote on issues and developments of high importance.

There was brief discussion about this proposal (but no resolution at this time) resulting in the suggestion that the existing NAGARA committee on information technology might take up this matter.

Charles Dollar then talked briefly about the recent Optical Digital Storage System study, focusing on the scanning capability and any potential damage it

might do to archival materials, the issue of legibility of optical disks, the durability of the disks, cost-effectiveness of using optical disks for archival purposes, and the need for additional research needed in these areas. While the study revealed that optical disk technology did not pose risk to archival materials and that the technology could produce legible images of archival quality, there was significant concern for the cost-effectiveness of the technology (since scanning was working only at one third the normal rate of current microfilming approaches); Dollar did mention, however, that there were some problems in the test, and that research results suggest that optical scanning could be improved to exceed microfilming rates. He noted that the initial costs of optical scanning exceeds that of microfilming and paper until about the seventeen year point, when the costs improve for optical scanning over both paper and microfilm. Some of the Institute participants raised concern about the durability of optical disks, although the National Archives study suggested a durability of one hundred years with the additional ease of reformatting (technology obsolescence then becomes the primary issue). One of the major problems is that the optical disk technology is an immature technology, and there are also legal problems in many of the states (in that optical disks are not acceptable as legal evidence in the courts).

Beginning to Chart the Future (June 13-15, 1990)

After lunch, David Olson led a brief discussion on where and how the state archivists should be going in keeping the Institute's momentum going. Olson reported on behalf of two previous ad hoc small group discussions that identified two major aspects or areas that they could be focusing on: first, developing visions of the role of state archives in a changing information environment to 2001; and, second, communicating the vision to others. Olson used the library preservation movement as an example of effectively marketing a particular vision, noting (as others agreed) that the archival community has not been as effective as it could in promoting and communicating its own mission. The participants are thinking about a three or four day session, with outside non-archival facilitators, in which they would first work through a vision for the role of state archives in the future and then move to communicating the vision. One long-term goal for this effort would be an audio-visual production, like *Slow Fires* (chronicling the library preservation problem), that would reach a larger public audience.

Larry Hackman then led a group discussion on a statement of revisions to the currently proposed amendments to the Paperwork Reduction Act. Since the group did not know what version of the bill (House or Senate) was moving forward, the proposed recommendations were kept general to meet either version. The recommendations related to reporting regularly on the financial impact of federal information policies and practices on state and local government, mandating that federal information design standards require that information disposition recommendations be advanced for records management and archival review, allowing comment by appropriate bodies on proposed federal information systems required to be maintained by state and local governments, developing an information locator system or public records management system that is available

to the public and private sectors, requiring review of government standards for information systems and audits taking into account impact on state and local governments and, where there is information of archival value, stipulating basic government employee information stewardship and providing for a continuing Federal Information Resources Management Council which meets and reports quarterly.

After a morning of independent work, the participants re-assembled on June 14 to begin concluding a variety of the projects they had started during the Institute. First, they discussed the two working group reports on national and state government initiatives. There was discussion about the suggested resolution for a joint federal-state committee on electronic records to be called by the Archivist of the United States that was proposed earlier in the Institute and that the small working group on national government issues identified as a possible initiative. There was also discussion about to whom the national issues and initiatives statement should be directed. Following this, the group considered a redraft of recommendations for the Paperwork Reduction Act amendments and what to do with the recommendations that emerged from the Institute's discussions. It was agreed that the recommendations would be sent to Jerry Berman and Page Putnam Miller in the name of the NAGARA Institute participants and to present the recommendations to NAGARA for that organization's use and endorsement. Participants also expressed interest in using the statement of recommendations in their own states. David Olson then reported on future planning and education needs by the Institute participants and other state archivists and archivists not present at the Institute in the areas of a vision for state archival programs in the twenty-first century and for electronic records and strategic planning. It was agreed that the NAGARA education and professional development committee should consider future efforts. It was also agreed that there should be a grant proposal submitted to the National Historical Publications and Records Commission to continue the Pittsburgh Institute in 1991 and 1992 for a different group of state government archivists. The Institute participants endorsed the following resolution:

> We recommend that the NAGARA Board seek means to continue the successful professional development efforts which the NAGARA/Pittsburgh Institute has helped foster. We recommend specifically the following projects:
>
> 1. A new version of the Institute should be developed, similar to the 1989-90 Institute, for state archivists or administrators who were unable to attend the 1989-90 Institute.
>
> 2. A new strategic planning mechanism needs to be developed to provide an on-going mechanism for state archivists to coordinate their efforts in shaping a common agenda.

David Olson, Virgina Newton, and Gordon Hendrickson agreed to serve as a working group for the latter project. The NAGARA Professional Development

Opportunities Committee will continue to handle the Institute's planning and implementation.

Concluding the June 14th activities, the participants gave brief reports on their reactions to the Institute and their plans for the future. Statements prepared by the participants have been appended to this report (see Appendix Two). All of the states have identified various kinds of future initiatives, ranging from single agency case studies to broader strategic planning efforts. The participants also stated that the Institute helped them in thinking through electronic records issues and learning about new developments in information technology. Some of the participants noted that the opportunity to learn of the mutual support possibilities and other resources was very important for them as they looked to the future. Some of the participants expressed the need for continued support and help as they worked for appropriate legislation, development of state archives personnel, and resources in order to manage and preserve electronic archival records. One participant noted that the Institute reaffirmed for him that electronic records pose great opportunities as well as challenges. Another state archives representative stated that this Institute helped legitimize their case that their efforts to work with electronic records was not just a idiosyncratic programmatic initiative, but was part of a national agenda. Representatives of the National Archives noted that the Institute had assisted them in focusing on the national issues outside of the federal government.

On the morning of June 15 the Institute closed business. It approved final recommendations for the revisions to the Paperwork Reduction Act (see Appendix One). The participants next considered the joint Federal-State committee on electronic records which had been proposed several days before. The resolution was passed (with abstention by the National Archives representatives) in the name of the Institute as follows:

> Federal information practices have a large and growing impact on the costs and operations of state and local government. They affect - and often mandate - the collection and reporting of information. They influence - and sometimes determine - the design and operation of information systems and the acquisition of information technology. They frequently require state and local governments to retain massive amounts of information with little direction on its ultimate disposition. Federal performance must improve in all of these activities. Policies should be more attuned to the needs of state and local government and developed in closer consultation with them.
>
> To promote these improvements, we recommend that:
>
> The Archivist of the United States create a small joint Federal-State committee on electronic records which will meet at least two times per year to exchange information, seek shared strategies, and plan for effective advocacy for policies and resources relating to the following:

* Standards affecting electronic records of archival value

* A research and development agenda for electronic records

* Disposition analysis, especially for intergovernmental electronic records

* Training and technical assistance and exchange of staff.

This joint committee should issue a brief annual newsnote on issues and development of high importance.

The Institute participants then approved sending the document "Electronic Records, Archives, and State Governments" to NAGARA for consideration as publication as a brochure (see Appendix Three). The institute then approved a statement on "National Issues and Initiatives" (see Appendix Four).

After these actions, the participants conducted an informal evaluation of this year's Institute (a summary of the more formal evaluation is included in Appendix Five). There was consensus that the Institute should be offered again, with specific comments for suggestions:

* Offering a version of this Institute focused on strategic planning for preservation (opened more broadly to other archivists).

* Fine-tuning the Institute for another group of state government archivists and records administrators.

* Developing an Institute on strategic planning and electronic records for local government records administrators.

* Providing short-term reunions for participants in this year's Institute to have follow-up education and evaluation.

There was also discussion about coming back next year for three to five days for updating and reassessments of efforts and perhaps for a more intensive discussion of the appraisal of electronic records in government. The discussion next turned to specific strengths and weaknesses of the Institute. One participant specifically noted the need to have more on systems design and appraisal of electronic records.

The Institute participants adjourned and returned home.

APPENDIX ONE

PAPERWORK REDUCTION ACT REVISIONS
RECOMMENDATIONS OF THE NAGARA INSTITUTE ON ELECTRONIC RECORDS
JUNE 1990

Federal information practices have a large and growing impact on the costs and operations of state and local government. They affect--and often mandate--the collection and reporting of information. They influence--and sometimes determine--the design and operation of information systems and the acquisition of information technology. They frequently require state and local governments to retain massive amounts of information with little direction on its ultimate disposition. Federal performance must improve in all of these activities. Policies should be more attuned to the needs of state and local government and developed in closer consultation with them.

To promote these improvements, we recommend that the proposed Paperwork Reduction Act amendments of 1990 be further revised and that the legislative history of the Act reflect, wherever appropriate, the concerns expressed below.

These recommendations would increase the economy and efficiency of the Federal government and strengthen its accessibility and accountability in both the present and future. The modifications would also reduce the burden of costly and often duplicated information analysis and retention on state and local government and improve intergovernmental coordination in the administration of records, including those of enduring value for research and education.

Recommendations[18]

o The Director of the Office of Management and Budget should be required to report annually to the President and the Congress on the financial impact of Federal information policies and practices on state and local government. This report should assess the Federal effect on the disposition of state and local records and describe Federal coordination and consultation with state and local governments to improve intergovernmental disposition practices.

o Federal information design standards should require that information disposition recommendations be advanced for records management and archival review as part of the planning process for each new information system or, for an existing system, when it is being redesigned. In an electronic environment, early life cycle analysis and decisions are essential to insure that information is retained which has legal, audit or administrative value or is needed for future research or education.

o When Federal agencies intend to create information systems that impact on state and local government or to require that information systems be created or managed by state and local governments, they should describe--and then provide a period for public comment on--the operation of the proposed system, including its records retention and disposition requirements. State government records management and archival agencies should be notified directly regarding the proposed retention and disposition requirements.

o An information locator system/public records management system should be developed and available on line and in other forms to serve effectively at least the following purposes:

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[18]Institute participants are prepared to offer via NAGARA specific language to incorporate these recommendations in either or both Senate and House proposals for Paperwork Reduction Act revision.

(a) To provide information about **major** Federal information systems sufficient for other Federal agencies, state and local governments, the private sector and the public to know of the existence and understand the purpose and contents of these major systems. Information systems having a substantial impact on state or local government should be deemed major systems.

(b) To provide basic descriptions of other Federal information systems, these descriptions to be derived from the routine review of agency disposition requests as required by laws regarding archives and records management.

o Agencies should be required to submit records disposition proposals for all new information systems as part of the systems planning process and for all existing or inactive information systems by December 31, 1999.

o Agencies should create, maintain and provide access to documentation sufficient to determine the organization and content of data in each information system and to support retrieval, use and understanding of the information in the system for as long as the information is retained.

o Government standards for audits of information systems should require review of provisions for disposition of the information in the system. Audit reports should note explicitly instances: (a) where retention and disposition analysis has not been carried out or decisions made where these would have an impact on state or local government decisions and; (b) where adequate provision has not been made to identify and preserve information of enduring value to the government or citizens.

o Documentation and information stewardship responsibilities should be established for program managers, system managers, and other government employees responsible for the creation, management, maintenance or use of information systems. Position descriptions and performance management programs should address the specific responsibilities of each employee for stewardship of the information and information functions necessary for adequate and proper documentation of the public business.

o There should be a continuing Federal information resources management council which meets at least quarterly to report to and advise the Administrator of OIRA on the implementation of Federal statutes relating to information policies and practices and to discuss with him cooperation among agencies which have major coordinating or service responsibilities. The heads of the General Services Administration, the National Archives and Records Administration and the Library of Congress should be among the members of the Council.

o There should be a continuing special advisory committee to the Administrator of OIRA on intergovernmental information resource management issues. The committee should consist of an equal number (25% each) of Federal, state and local government and public members. At least one government archivist and one government records manager should be included. National organizations of state and local officials should be asked to propose individuals for appointment to this committee.

These recommendations were unanimously endorsed by participants in the month-long Institute on Electronic Records held in June 1989 and June 1990 at the University of Pittsburgh.

PARTICIPANTS

Richard Belding, Director, Public Records Division, and State Archivist and Records Administrator of Kentucky

Edwin Bridges, Director, Alabama Department of Archives and History

Charles Dollar, Director of Research and Evaluation, National Archives and Records Administration

Robert Dructor, Chief of Archives and Manuscripts, Pennsylvania Museum and History Commission

Lila Goff, Assistant Director, Minnesota Historical Society

Larry Hackman, Assistant Commissioner of Education for Archives and Records, New York

Dwight Harris, Division of Records Management, Mississippi Department of Archives and History

James Henderson, State Archivist of Maine

Gordon Hendrickson, State Archivist of Iowa

H.T. Holmes, Director, Archives and Library Division, Mississippi

David Hoober, State Archivist of Arizona

Sidney McAlpin, State Archivist, Archives and Records Center, State of Washington

Gerald Newborg, State Archivist of North Dakota

Virginia Newton, State Archivist of Alaska

David Olson, State Archivist, State Archives and Records Administration, North Carolina

Harry Parker, Associate Archivist, Pennsylvania HIstorical and Museum Commission

Peter Schinkel, Director, Records Management Division, Georgia Department of Archives

Ken Thibodeau, Director, Center for Electronic Records, National Archives and Records Administration

Roy Tryon, Director for Archives and Records Management, South Carolina Department of Archives and History

FOLLOW UP:

1. Copy to NAGARA Executive Director and Chair of Information Technology Committee with recommendation that NAGARA, on behalf of the Institute on Electronic Records: (a) bring the recommendations to the next meeting of the State Information Management Working Group, including any representatives of the OMB and the Congress; (b) mail copies to other members of the Working Group; (c) mail copies to the Executive Director and President of CSG, NASIRE, NGA, COSLA, NCSL, NACO, IIMC and other appropriate national associations representing state and local government interests; (d) mail copies to the Archivist of the United Stats, the director of the General Accounting Office and to the staff directors of the Subcommittees of U.S. House and Senate who are handling the Paperwork Reduction Act.

2. Copy to be provided by Toni Carbo Bearman, in her role as President of ASIS, and to ask her to convey the document to ASIS, ALA and other appropriate library and information science associations.

3. Copy to be provided by Ken Thibodeau to IRAC and other appropriate records management and

IRM group within the Federal establishment.

4. Copy to be mailed directly by Hackman to the NCC (Page Miller) and ACLU (Jerry Berman) as soon as possible. Copy to be mailed on behalf of the Institute participants to any of the other parties indicated above if this is not accomplished by others as recommended above.

5. Copy to be mailed from individual state archives and records program or community to Members of the House Government Operations Committee (especially the Subcommittee on Government Information, Justice, and Agriculture) and the Senate Governmental Affairs Committee (especially the Subcommittee on Government Information and Regulation) and to any other members of the state's Congressional delegation. See attached list of Committee and Subcommittee Members.

APPENDIX TWO

State Archives Statements About the Institute and Future Initiatives

The following statements were written by Institute participants at the conclusion of the second phase of the Institute. They are reproduced here as they were written (with only slight editing) and are intended to represent possible future activities that the various states might take in regards to managing electronic archival records and how the Institute has assisted the development of plans for these activities.

Alabama. The Alabama Department of Archives and History is working at several levels with the issues raised by this Institute. At the state government level, we hope to promote greater coordination in overall state information resource management. We will attempt to work with the Data Services and Management Division and with the loosely structured state data processing committee which they coordinate to promote a more cohesive information resources management orientation.

Within the Department of Archives and History, we will complete in September the formal strategic planning process that began in January. This effort grew directly out of last year's session of the Institute and has already contributed a great deal in improving communication, coordination, and focus within our agency.

Our Records Management Division staff members have already begun to re-vision their role in the appraisal and acquisition of state government records. This reevaluation grows as much out of staff reflection on the futility and inappropriateness of traditional practices as from my educational experiences at the institute. The institute has, however, helped make us enthusiastic partners in the effort to reformulate our strategy. We have begun a pilot project scheduling the state's new electronic Financial Resources Management System. We are also hiring a full-time electronic records specialist and are making a major commitment to expanded training for current staff members in this area.

(Edwin C. Bridges)

Alaska. Electronic records management continues to be a hot topic in Alaska. For the next year I plan to spend a great deal of time and energy on this issue. Following is a summary of tasks:

1. Continue drafting electronic records regulations with the Department of Law

2. Hire a records analyst whose duties will include electronic records management

3. Continue working with the Information Systems Committee on the Statewide Information Management Plan. Currently I am working on the Information Technology Directory (due June 20). Archives input on the plan is due June 27 and the plan is scheduled to be finalized on October 5.

4. Monitor HB 405 on public access to electronic records. The bill passed the Legislature but the Governor has not yet signed it. According to Ed Levine, who met with the Governor, he opposes the bill and may veto it.

5. Address electronic records management concerns in budget preparation.

In Alaska I have little opportunity for contact with peers. Because of this Institute I am prepared to be an effective player in the management of electronic records in Alaska. I am up to date on the national issues, have a better understanding of the political environment, and know how to articulate archives and records management concerns. At this second [phase of the] Institute I have received valuable input on Alaska's pending regulations and legislation and gained a more realistic understanding of the management of electronic records. My greatest concern is how to stay current in this rapidly changing, volatile arena.

(Virgina Newton)

Georgia. The Institute has prepared the Georgia Archives to assume a lead role in our parent agency (Secretary of State) strategic planning initiative, set to begin next month [July].

We will take advantage of the opportunity to advocate the inclusion of electronic records management principles in the agency's mission statement and strategic plans.

The Archives will continue developing its own strategic plans and tactical initiatives for integrating electronic records management policies and standards for Georgia's governments into existing administrative policy and standards vehicles: administrative rules and regulations, audits, purchasing requirements, merit system training, job descriptions, property management, etc.

We will increase Archives staff training in stakeholder analysis, advocacy methods, and assumptions testing as well as in information technology and standards application.

The Institute expanded the vision of Archives potential role in service to government and to the citizen. (Peter E. Schinkel)

Iowa. The NAGARA/CLR/SLIS Institute provided valuable tools for the Iowa State Archives to use as it addresses electronic records issues in an era of rapidly changing technology. Guidance on the utility, application and implementation of strategic planning as a management tool; additional acquaintance with technology and information trends and the systems design process; exposure to archival applications currently underway; and the strengthening of a network of archival colleagues concerned with electronic records issues all have resulted from the investment of time and resources to attend the Institute.

In the months ahead, the Iowa State Archives will continue its efforts to acquaint state information managers with archival concerns through its membership on the Information Management Committee of the state's Telecommunications and Information Management Council. The State Archivist anticipates initiating discussions with key information managers, especially in the Department of Human Services, the Department of Personnel and the Department of General Services to obtain a better understanding of their systems and of their concerns for a state information system.

Recent legislation opens the door for Iowa agencies to implement electronic filing of particular documents. The State Archivist anticipates working closely with the Corporations Division of the Secretary of State's office as it drafts administrative rules to implement this new legislation. The State Archivist anticipates seeking the advice of his "network" of archival colleagues, which this Institute has strengthened, as he reviews these administrative rules.

(Gordon O. Hendrickson)

Kentucky. The Institute has offered a good chance to confront a number of assumptions held by government archivists in a time of rapid technological change and to think about new ways to meet archival needs and responsibilities in an electronic age. Discussions among speakers and participants challenged me to look at our own work, our working environments, and our strategies with a new perspective and to recognize the inadequacy, in many cases, of our tools and approaches.

Institute sessions on strategic planning, information policy, systems analysis, and archival appraisal were especially useful and will be applied directly to our plans for the coming fiscal year.

Several of our important immediate objectives are identified in our statewide strategic plan for information resources development. Heading this list is the commitment of increased resources to the development and implementation of our Public Records Management Systems (PRMS); collaborating with our state Department of Information Systems on developing and implementing a coordinated systems design approach which addresses archival needs as part of an established, on-going procedure; participation in two task forces dealing with information policy development and assessing the need for legislative or regulatory changes as a result of developments in electronic technology; and developing and issuing administrative regulations to assist Kentucky public agencies in assessing their needs in selecting electronic records systems and storage media, including optical disk technology, with a strong focus on continuing agency responsibility for ensuring data portability transfer and migration, with changing technology.

While we enjoy good working relationships with the other major interested agencies and

parties concerned with information policy and management, these relationships need to be strengthened and based on a strong procedural framework and improved understanding of interests and roles. A more comprehensive education program, both for staff of our agency and for external audiences, will be a continuing need. For our own staff, there must be a realization, broadly shared, that electronic records affect the work of every unit, not just a specialized core staff. For external audiences, it's critical that all stakeholders understand what is at stake in ensuring the continued availability of electronic records of enduring value.

Communication with and support of colleagues in the special conditions of the Institute have provided new ideas and energy to face both state and national issues dealing with electronic records. (Richard N. Belding)

Maine.

I. Status of Electronic Records Planning and Action

A. Planning: During the fall of 1989, the Maine State Archives conducted a strategic planning process which produced an interim plan focusing on action to be taken through February 1, 1990. The interim "Electronic Records Management Plan" of approximately thirty pages encompassed a review of the environment, stakeholders and legal authority of the Maine State Archives. The plan provided a clear "mission statement" and an articulation of short- and long-term objectives.

B. Recent Action: Strengthened internally with the planning process and product, the Archives conducted negotiations with Maine's Office of Information Services (OIS) to define an appropriate role for the Archives in electronic records management. These negotiations produced agreement on a report to the Maine Legislature indicating a cooperative approach by the two agencies.

OIS suggested areas for intervention by the Archives in the official "Systems Design Standards" for electronic records. The Archives has produced specific recommendations for such intervention to identify and control electronic records of archival interest.

C. Future Action: Specific amendments to the system design standards will be proposed by September 1990 for adoption by the Information Services Policy Board. The first application of the intervention process will be with respect to a newly approved corporation information system recently approved by the Archives' parent, the Secretary of State's Office.

II. Impact of the Electronic Records Management Institute

A. First Session - June 1989: The strategic planning model, along with collateral resources, provided the basis for Maine's plan and inspiration for action.

B. Second Session - June 1990: The exchange provoked by the experience of colleagues, reports from other sources and ad hoc Institute task forces has provided additional resources to continue planning and action in Maine.

(James S. Henderson)

Minnesota. There has been a growing division between the practices of state and local governmental agencies and the mandate of the Minnesota State Archives. The desire to increase economy and efficiency through the use of electronic records is in direct conflict with the requirement that public records be maintained on an archival medium. The Institute offered the opportunity to understand the issues surrounding electronic records and to bridge the developing gap with the governmental agencies.

The challenge clearly outlined during the first year of the Institute was to develop a strategic plan for dealing with electronic records. As the State of Minnesota had just established an Information Policy Office and had identified some of the fundamental issues - public ownership of information, for example - it seemed to be merely a question of bringing the State Archives to the table for discussion. The State of Minnesota has long been committed to the preservation of

its history and the transfer of this commitment to the use of electronic records should be smooth.

However, such was not the case. Various state agencies, departments, and committees dealing with technology issues did not have the concerns of the State Archives high on their agendas, and the State Archives did not convey sufficient justification to be involved in the electronic systems planning processes. While the few conversations with records managers and consultants were positive, there were not concrete results.

The second Institute offered an opportunity to discuss the stumbling blocks faced during the year as well as to hear of the successes. Most importantly, it was a reinforcement of the commitment to cope with the problems presented by electronic records. Much discussion centered around issues that could be dealt with cooperatively and on the national level. New issues presented since the first year demonstrated how swiftly electronic issues develop and require constant monitoring.

In Minnesota during the past year several county governments wanting to use optical disk technology attempted to by-pass the state archives law with special legislation. While that particular legislation did not succeed, the legislature did require that the Records Disposition Panel, which includes the State Archives, establish standards for the use of optical disk technology. Optical disk systems was a subject of the second institute, and the discussion was a helpful beginning step toward developing the standards. Although there was no consensus among the participants (Some felt a paper or COM back up must be required, others would settle for a commitment to maintain the system as the technology develops), the concerns and the rationale were most enlightening.

The second year of the Institute has provided a renewed commitment to move ahead with planning for electronic records. The visibly more unified efforts and stronger likelihood of a national vision is reassuring. The training has been valuable, the opportunity for input important, and the discussions fundamental to dealing successfully with electronic records. (Lila Goff)

Mississippi. While the Mississippi Department of Archives and History has a general mandate to manage state records, this mandate did not specifically refer to electronic records. Therefore our role in electronic records management is poorly articulated. Last year's Institute drove this legislative failure to the forefront. We now realize that access to electronic data is hampered by complicated systems and lack of documentation of how the information system is applied within the agency.

In 1984, our legislature reorganized and added new responsibilities to our Central Data Processing Authority (this agency was charged with the responsibility to control the rapidly rising expenditures for data processing capabilities, yet improve the effectiveness of those expenditures). Under reorganization, the new management has shown a great interest in the archival preservation of information, and we have joined together on a pilot project, using a small agency, to articulate our needs at the system design phase. In July, we will cross-train the archival staff with CDPA's systems analysts which will hopefully bring about an understanding and ability to administer an effective records management program for electronic records.

Using this pilot project (and using the influence of other key stakeholders -Attorney General's Office, Governor's Office, Department of Health, Department of Human Services, Mississippi Emergency Management, and Secretary of State), we plan to introduce legislation in January 1991 to ensure the retention of electronic records of enduring value and request new positions to address this need.

This Institute exposed me to new avenues in addressing electronic records appraisal decisions, and I strongly recommend the continuation of this valuable program. (Dwight Harris)

New York.

Plans and Activities

1. The State Archives and Records Administration (SARA) will create in 1990 a Center for Electronic Records (CER) to provide leadership and expertise, increase visibility, and better focus SARA efforts on electronic records issues. Several existing staff members will be assigned to the CER as new staff are recruited to carry out other duties relating to records analysis and disposition.

2. Beginning in 1990, work plans of all three State Records Division bureaus will include activities to directly address electronic records objectives in the SARA three year plan.

3. Beginning in 1990, SARA will undertake a major internal staff development effort required for electronic records work. This will begin with a six to nine month educational program for the eight senior managers in SARA plus several other staff who will be most directly involved in electronic records initiatives for state and local government. This program will roughly duplicate the contents of the Pittsburgh Institute of 1989 and 1990.

4. SARA's director, assistant directors, and the leadership of the Center for Electronic Records will concentrate more directly in 1990-92 on analysis of and contacts with major stakeholders regarding electronic issues. This will include legislative members and staff and leaders in the local government community.

Impact of Pittsburgh Institute

The Institute has strengthened my perception that electronic records is both the major challenge of the State Archives and Records Administration and an opportunity to address archival needs for the future. It has improved my understanding of strategic planning approaches, including the deficiencies of some of SARA's past planning efforts. It has introduced me to some of the main information technology developments and issues, including important standards and key organizations and reports. It has convinced me that an Institute approach can be an effective tool for both continuing education and for agenda setting and strategizing, both for a single state and for the broader government records community. It is a device that we should draw upon again.

(Larry J. Hackman)

North Carolina. "Camp Electronic Records" was a useful experience both in its intended purpose (the planning of an electronic records program), but also in many other unintended, but useful "spin offs" as well. The strategic planning techniques garnered in the two sessions at Pitt are beginning to be of utility in my agency. Two separate and important strategic planning efforts are underway - one internal: in our Records Services Branch, and another in a wider arena, the formation of a state information policy task force. Materials handed out or mentioned during our sessions are of great help in our research on ADP standards.

The establishment of an electronic records program in North Carolina will not be an easy task. Many administrative and political problems exist, however, the effort is being made, and the Pittsburgh Institute in 1990 has given me the tools needed to continue. One hopeful sign in 1990 - not seen as clearly in 1989, is that model programs are beginning to emerge. These are apparent in the National Archives, the National Archives of Canada, and in the states of Kentucky, New York, and Washington. This is encouraging.

Thank yous to the University of Pittsburgh, NAGARA, and the Council on Library Resources are in order! (David J. Olson)

North Dakota. The Institute moved my understanding of electronic records issues from an underdeveloped sense of need and purpose to a more conscious understanding of the complexities, challenges, and opportunities involved in this vital issue. Other Institute participants provided information on a range of experiences while instructors provided tools and approaches for planning and for addressing electronic records. While it has not provided an obvious model for addressing electronic records, the Institute has provided important strategies.

In the months ahead, my intent is to pursue a strategy which will establish the archives as a player in the field by attempting to

1. Establish a base of support for archival preservation of electronic records
2. Gather data for more comprehensive future planning.

Implementing activities will likely include

1. Consulting with appropriate controlling agencies on policies and procedures
2. Seeking informally advice from a broad range of interested stakeholders
3. Improving staff competence in electronic records
4. Establishing a working relationship with a single agency which has an electronic records system of known value to learn managers' views, develop procedures, and test concepts. (Gerald Newborg)

Pennsylvania. As a result of our participation in the 1989 institute, the Pennsylvania State Archives developed a preliminary plan for addressing the issue of electronic records and their management in the Commonwealth. While progress to implement components of this plan has been slow, the lines of communication, between those agencies sharing responsibility for the management of the Commonwealth's information resources, have been established and arrangements have been made to meet with representatives of these agencies in the very near future. As a result of our participation at the Institute, we believe that we are better prepared to participate in these meetings. The outcome of these and any subsequent meetings will go a long way toward the establishment of a consistent and comprehensive electronic records management program for the Commonwealth and will dictate both the direction and content of the Archives' proposed program to appraise, schedule, acquire, preserve and make available to the public records created in an electronic format. The overall benefit of the Institute has been to legitimatize the Archives' concerns with electronic records management and to raise awareness that this is a national issue and not just an isolated program initiative of our agency.
(Robert M. Dructor and Harry F. Parker)

South Carolina. South Carolina is now poised for action on electronic records. Since the last Institute session, I have been appointed a member of the state information technology advisory committee, added an individual with significant computer expertise to my staff, and secured recognition of electronic records in the Department's strategic plan. Upon my return to South Carolina I will be launching more in-depth stakeholder analysis and planning activities. My expectation is that a formal plan will be developed by fall, with pilot start-up some time in the spring.

The Institute has been invaluable for helping me to focus on electronic records and providing me with the planning tools necessary to deal with this and other management challenges. The past two weeks have been especially useful in opportunities afforded me to discuss my concerns and plans with Institute faculty and other participants, and to gain a better appreciation of the planning process and technology issues. This has been an extremely valuable and worthwhile experience. (Roy H. Tryon)

Washington. The Washington State Machine Readable Project Report issued in 1988 laid the groundwork for an electronic records and archives program. The Institute has reinforced rather than contradicted the basic goals and objectives cited in the report. However the report is tactically oriented and the state lacks a comprehensive strategic information policy and plan within which the report objectives and tasks could most successfully operate. The Institute has imparted a strong conceptualization of what information resource management consists of and insight into how a strategic information plan could be developed. The Institute has also framed a picture of strategic planning and electronic archives programs being developed in other states and nationally and has provided a network for communicating with experts and colleagues with whom plans, trials, and successes can be shared and critiqued. This is extremely valuable given

the small window of opportunity archivists have for dealing successfully with electronic records. The Washington State Archives will take advantage of this opportunity by:

1. Seeking resources in the 1991-93 budget (now being prepared) for completion of phase one of our report (automating the division's information systems) and implementing phase two (the electronic records management tasks).

2. Complete the division's long range plan called "Archives 2000" using the strategic planning concepts learned at the Institute.

3. Promote the development and implementation of a statewide IRM policy and system of which the division's electronic archives and records plan would part and parcel. (Sidney McAlpin)

APPENDIX THREE

"Electronic Records, Archives, and State Governments"

Introduction: This document is a product of the state government issues working group and was approved by all Institute participants. It is an effort to provide a broad statement of principles and considerations that Institute participants believe should inform the development of state programs for the management of electronic records of archival value.

Electronic Records, Archives, and State Governments

The rapid spread of computerized information systems is creating unprecedented opportunities and needs within state governments. To make the best use of these new systems, to provide a mechanism for addressing problems, and to ensure the preservation of electronic records of long-term value, we recommend that each state:

(1) Support the continued development of an overall coordinating body for the management of the state's information resources

(2) Recognize and strengthen programs to preserve electronic records of long-term value to the state and its citizens

A more detailed outline of what these recommendations call for is provided within this pamphlet.

"Whereof what's past is prologue; what to come,
In yours and my discharge."
Shakespeare, The Tempest

PREFACE

Electronic records systems are revolutionizing the way governments work. More dramatic still is the effect these systems have on the records documenting this work.

For centuries archivists have taken custody of government records in the last stages of the records' life cycle. When outdated records were no longer needed in offices, archivists could work with the office staff to decide what could be discarded and what needed to be transferred to the archives for long-term retention. In the 1930's, records management programs sought to systematize this process by specifying retention requirements at the time the record was created. Even if the records managers did not succeed, however, the paper records were likely to remain until archivists were ready to claim the small percentage of enduring value.

Electronic records systems wreak havoc on these practices. In electronic information systems, the data is constantly changing, the media are fragile, and highly specialized and often expensive equipment is necessary even to "read" the records. These systems require revolutionary new approaches to their management. If we fail to act promptly, we will likely fail in our obligation to the past, present, and future to preserve an appropriate record of the operations of our governments.

This brochure is an effort to highlight some of the changes states should consider in meeting the challenges of electronic records systems.

PRINCIPLES FOR GOVERNMENT RECORDS POLICIES

The following principles have traditionally shaped programs for the administration of public records in the United States. The National Association of Government Archives and Records Administrators believes they continue to provide sound guidance for state information policies in our new electronic information environment.

(1) Government officials create records in the conduct of public business. These records serve as documentation of government activities and a key mechanism of public accountability.

(2) Public records contain information that affects the rights and economic interests of both the government and its citizens. All possible care must be taken to ensure the integrity and proper management of this information.

(3) Governments must ensure the confidentiality of information that affects the privacy rights of individuals and the proprietary rights of businesses.

(4) Governments must ensure that information collecting and maintenance requirements on individuals and businesses are kept at the lowest possible level consistent with the legal mandates which require the information collection.

(5) Governments have an obligation foster the most efficient use of their resources, including those resources employed in the creation and management of information.

(6) Information, especially in computerized form, is increasingly recognized as a commodity that has economic value. To assure the greatest public benefit from this asset, governments should actively seek to make this information available for public use and to provide equitable means of access to public information resources.

(7) Government documentation is the key source from which the history of a state and of the lives of its citizens can be reconstructed. Governments have an obligation to their citizens--past, present, and future--to ensure the preservation of their historically valuable records.

STATE INFORMATION POLICY STRUCTURES

For these principles to be implemented in a coherent fashion, each state should provide for a central body which can coordinate information policies and strategies government-wide. The following concerns should be considered in the establishment of a state information resources coordinating body:

(1) To be fully effective, the coordinating body should be statutorily authorized.

(2) The coordinating body should also be broadly representative of governmental officials who have an interest in state information policies. Those represented should include the governor, the legislature, the judiciary, the central data processing agency, the budget and management offices, the audit office, the records management and archival agencies, representatives of state agencies, and perhaps even outside user groups. Committees may also help in focusing on special areas of need.

(3) The coordinating body should have not only adequate authority to carry out this mandate, but the staff and resources necessary for its research and other support functions.

(4) This body should monitor standards and new technologies and prepare the state for using them in the most efficient way. Improved systems compatibility and better coordination in the implementation of standards can assure not only a more efficient use of state resources, but the development of a more effective information infrastructure.

(5) This body should be an advocate of state interests in the national policy setting environments which shape information standards, technologies, and operational requirements. In the past, states have had little input into the national and federal decision-making processes which have such an important impact on state programs.

(6) Just as state agencies are affected by federal information policies and requirements, local governments are affected by both state and federal requirements. A major purpose of the coordinating body should be to provide consistent and useful guidance to local governments in the development of their electronic information systems. The coordinating body should promote standards and practices that will foster compatibility between systems and facilitate appropriate interchange of and ready access to information.

(7) A number of states already have active information coordinating bodies. Their experiences show that a broad strategic planning framework provides the most effective method for harmonizing the many interests connected with managing a state's information resources. This strategic planning framework includes requirements for individual agency planning, for the use of those plans in budget review and allocation decisions, and for regular periodic reports to the governor,

legislature, and interested parties on the status of this planning. These reports should include cost analyses, reviews of problems and successes, and proposals for future activities.

THE ARCHIVAL PRESERVATION OF ELECTRONIC RECORDS

Public records, regardless of format, must be maintained or disposed of according to good public policy principles. For most states, formal review processes for the disposition of paper records have long been routine practice. The scheduling and disposition of records in electronic formats, however, requires major modifications in traditional archival practices. The following is a list of considerations for developing programs to address the archival challenges of electronic information systems:

(1) Judgments about the retention of records need to be based on an overview of the entire information system. A guide to state information holdings, preferably computerized, is a vital tool in providing this overall knowledge. Such a "locator" is also a useful tool for other aspects of information policy coordination, such as enhanced inter-agency cooperation, improved public service, and better administrative control.

(2) To assure the preservation of electronic records of long-term value, archivists should be involved in the planning and design stages of new systems. Because of the unique characteristics of computers, information of long-term value may be lost unless retention procedures are built into the systems.

(3) An effective archival program for electronic records requires the support of the line managers who are responsible for these information systems. Their involvement in retention decisions means that the decisions will be made by those who know the records best. Their involvement in the implementation of these retention decisions is necessary for the preservation program to succeed.

(4) Electronic records of continuing value should be transferred to secure storage early in their life cycles. This early transfer allows for verification of the data, validation of the medium, confirmation of appropriate standards, and the acquisition of system documentation.

(5) The records must be stored in accordance with established archival standards. The media must be inspected periodically as provided by these standards. Provisions must also be made to migrate the data into new systems when the current media either begin to deteriorate or become obsolete.

(6) Provisions should be made for the research use of the records in a way that does not place an unreasonable burden on the repository, but that fully supports governmental and public needs for access to the information.

(7) Electronic records are increasingly important as a source for documenting state history. In setting their priorities, state archival agencies need to reflect both the importance of these records and the unique requirements of electronic records. They need to develop specific competence in dealing with electronic records issues, develop relations with state managers who use these systems, and participate in shaping state policies to ensure that archival issues are routinely addressed in the

development and operation of new information systems.

(8) To help the state in meeting the challenges of electronic records, archives must have the support of state administrators and resource allocators. Current archivists need increased training, and archival agencies will need additional resources, the help of additional information systems specialists, and greater administrative support.

A CHECKLIST OF ARCHIVAL CONSIDERATIONS

___ **A state information policy coordinating body**

___ **A full picture of state information resources**

___ **Coherent government-wide standards for information systems**

___ **Recognition of the legal status of records in electronic formats**

___ **Adequate legal authority for the archival agency**

___ **Program manager involvement in records disposition decisions**

___ **Early involvement by the archives in system planning, design, and evaluation**

___ **Early transfer of records of long-term value**

___ **Validation of data/documentation of systems**

___ **Appropriate archival storage**

___ **Periodic testing of stored information**

___ **Timely migration of archival records to avoid obsolescence**

___ **Adequate provisions for research use**

___ **Archival priority given to electronic records concerns**

___ **Specific competence by the archives in electronic records administration issues**

APPENDIX FOUR

"Areas of National Concern and Recommended Initiatives"

The Institute members have identified three areas of national concern in the management of electronic records: access, accountability, and economy and efficiency. Archivists bring a special perspective which can help to address these concerns.

Areas of Concern

1. Access

   Requirements for information exchange, portability, and metadata are necessary to ensure long-term access to government information. They must be consistent with freedom of information and confidentiality laws and regulations.

2. Accountability

   Accountability through information audits and assignment of responsibility and stewardship is necessary to ensure sound disposition practices, maintenance, and adequacy of documentation.

3. Economy and Efficiency

   Minimizing the collection and maintenance of duplicate data and information by federal and state governments is necessary to enhance economy and efficiency and to improve government employees' use of information in performance of service delivery.

To address those major concerns, the Institute participants agree on the importance of the following initiatives to deal effectively with them.

Initiatives

1. Amendment of the Paperwork Reduction Act (as expressed in the institute's recommendations) and/or federal regulations.

2. Creation of federal and state government information locators, or other metadata systems, and access to them by federal, state, and local government agencies and the general public.

3. Appointment of a joint federal and state committee on electronic records by the Archivists of the United States to ensure that appropriate state and local government concerns are addressed in federal records retention requirements, to advise OMB-OIRA regarding the impact of retention requirements on the states, to study and report on necessary information technology standards, and related matters.

NAGARA Action

The National Association of Government Archives and Records Administrators (NAGARA) should make action on the foregoing areas of concern and initiatives a priority.

The Institute participants are unanimous in urging NAGARA to conduct a stakeholder analysis and environmental scan (e.g., including member organizations of the Council of State Governments and other professional organizations) to ensure success on the proposed initiatives and any future activities regarding electronic records.

APPENDIX FIVE

Evaluation of the Institute

This is a very brief summary of an evaluation work sheet completed by the participants. A more complete evaluation of the Institute has been prepared by Richard J. Cox for a session at the 1990 Society of American Archivists meeting and is available upon request.

The evaluation of the Institute by participants was very positive, reflecting the statements reproduced in Appendix Two. On a scale of 1 to 5 (5 being excellent and 1 poor), the participants gave the Institute a mean rating of 4.4, with no evaluation lower than 4. Lectures received a mean rating of 4 and the small group sessions a mean rating of 3.60. The School of Library and Information Science was also given a very high rating for its support of the institute (4.87). Participants were also asked to rank the most important aspect of the Institute; the following general ranking (1 being most important and 4 least important) occurred:

Strategic Planning	1.6
Information Technology	2.2
Time With Colleagues	2.4
Time Away from Office	4.0

Participants were asked to rank the Institute as a form of advanced archival education, giving it a high ranking (4.47) and also ranked the Institute highly as a supplement to existing graduate archival education programs (4.00). Participants noted that the Institute was very valuable for introducing them to new information (4.47) and strongly endorsed the concept that there should be other Institutes like this one (4.53) and that staff in their institutions would benefit from an Institute like this (4.53). Participants indicated that the following topics (5 being most important and 1 least important) would be appropriate topics for other Institutes:

Appraisal	4.53
Public Programs and Advocacy	3.87
Preservation	3.73
Management	3.67
Reference	3.40
Other Special Media Records	3.33

Participants were also asked to state what they thought was the area that needed the most improvement. A range of comments came in, including the following:

"Bibliography in enough time to read prior to institute."

"In some cases, lecturers who have more experience with archives and records management field."

"Sometimes too much time was spent discussing semantics regarding terminology /postures rather than real issues."

"Realistic expectations on what can be accomplished."

"More focus on the way the agenda was set."

"The second year was a few days longer then necessary, possibly because the group had already developed a camaraderie and there was little to fight about."

"I would suggest a couple of 'field trips' during the two weeks; these would build on existing strengths."

"Relating other offerings (systems design, appraisal) to management needs."

Many positive comments were made by participants about the Institute. The nature of these comments is represented by those below:

"Strong on content in areas heretofore little covered for senior archival management. Opportunity to work with, meet with colleagues on these subjects over an extended time period particularly valuable."

"Advancement of archival education - for the first time archivists addressed a major issue collectively and on a national level."

"The bringing together of human resources that could be creatively used in a variety of ways for information/knowledge building purpose."

"Intensive uninterrupted discussions, interspersed with lectures, on a problem severely impacting archives and in great need of cooperative discussions and understanding. The unanimous concerns and sense of direction at the end of the Institute will probably have the great and long term value to the profession and to the individual participants."

About a third of the participants declined to write anything about a weakness.